

The

BLUE JAY



BULLETIN
of the
SASKATCHEWAN NATURAL HISTORY
SOCIETY

In Co-operation with
The Saskatchewan Provincial Museum

The Blue Jay

Official publication of the

SASKATCHEWAN NATURAL HISTORY SOCIETY

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The aim of the society is to continue and extend the work and ideas of the Founder of the BLUE JAY, the late Mrs. Isabel M. Priestly, in forming a medium of exchange of nature observations of mutual interest, and in working together for the protection and conservation of the wild life in Saskatchewan.

HOW TO SUBSCRIBE

The BLUE JAY is published quarterly at a yearly subscription rate of one dollar. Anyone interested in any phase of nature will be a welcome member to this organization. All subscriptions will start and terminate on the first day of January.

All material for the BLUE JAY, as well as all subscriptions and business letters, should be sent to the Editor at 1077 Garnet Street, Regina.

Material for each of the four issues should be submitted not later than Feb. 15, May 15, Aug. 15, or Nov. 15, as the case may be.

THE EDITOR'S DESK

To most of us, March and April were months of expectation rather than realization. Up to May 7th there were no swollen buds on trees or shrubs: there was hardly a blade of green grass along the roadsides -- only the crocuses in certain areas braved the chilly winds. The elm trees bloomed, in Regina, on May 12, and if this is any criterion, spring was just twenty-two days later than it was in 1949.

But a late spring is often a blessing in disguise. April moisture was plentiful and within two weeks following May 8th, growth was phenomenal: the trees and shrubs were bursting their flower-buds; the leaves were beginning to uncurl themselves from the winter dormant state; song birds were everywhere and the countless small sloughs that dot the prairie were each harbouring at least one Mallard Duck and its proud and lovely mate.

The retarded growth of our wild fruit trees and shrubs will, no doubt, mean that the blossoms will mature free from the killing ravages of a late frost. All indications point to a lovely summer; to prairie flowers in profusion; to Saskatoons and other fruits in abundance. There will be more birds nesting at one time than we have known for years. Both the open prairie and the shades of the valley or forest will bring to those who love the out-of-doors a perfect satisfaction and enjoyment in the abundance of life which Nature, this year, has to offer.

Every bird and butterfly, every mammal and reptile, every plant flower and tree has a fascination of its own for those who would read it aright. It forms a page in the great volume of Nature which lies open before us, and without it there would be a blank; in Nature there is no space left unoccupied.

We invite our BLUE JAY readers to open this Book of Nature and to enjoy and digest as much of it as possible during the brief stay of summer. When the hike in the valley is over, when the sun has set and the day is done, let us sit on the hill in the glorious twilight of the West and ponder over, first the experiences of the day and then the soft magic of a prairie evening.

SIGNS OF SPRING

P.L. Beckie, Bladworth



Spring is welcome once again after a cold and long drawn-out winter. The game birds have pulled through quite well. The Hungarian Partridge have fought their duels and paired off. They have left their winter feeding-grounds and returned to their chosen home for the coming season. The Sharp-tailed Grouse seem to have had quite an easy winter. Nearly every day we saw them feeding on the stubble next to our yard, the usual number being from 7 to 11. On one or two occasions there were 29 or 30. On calm sunny mornings they are to be heard in their dancing booms and mumblings.

Magpies are plentiful. I saw one flock of twelve, and earlier in the afternoon, four singles. They are busy locating nesting trees. Some Horned Larks remained all winter, but the main body arrived again on the second of March. I saw a Prairie Falcon on March 20; the first crow on March 28. Both the Mountain Bluebird and American Goshawk put in an appearance on April 2.

The Golden Eagle was a regular visitor. I saw singles on February 5 and 26 and on March 12, 13, 15, 18, 21 and 25.

NOTES FROM PUNNICHY

Madeline B. Runyan

Birds were late returning this spring. Two pairs of Rough-legged Hawks are nesting on our farm. Sharp-tailed Grouse wintered well. On May 3rd I counted a flock of eighteen. Ruffed Grouse are very scarce.

A Whiskey Jack (Canada Jay) wintered in the district. This is the first one seen for many years. The farmer, at whose place it stayed, did not know what it was, but my husband, who had lived in the Carrot River district where these Jays are plentiful, identified it at once.

HAIRY WOODPECKERS

Mrs. John Hubbard, Grenfell

With the help of a Hairy Woodpecker we unintentionally provided a feast for a number of grouse last winter. The woodpecker made his usual hole in the granary of wheat. The grouse couldn't reach the hole so the woodpecker obligingly kept pecking away and thus kept the grain running to his friends below.

The Downy Woodpeckers are very scarce now but the Hairy have evidently adapted themselves to civilization and stay around even in the thinning bush.

I want to tell you this story. Kerry Wood's note on Coyote drives brought it to mind. At one hunt near here a Hairy Woodpecker flew down a row of advancing hunters and it is reported that every man in the line fired at it -- and missed! It seems to be the general practice to shoot at everything shootable or movable.

There has been nothing remarkable in the way of spring birds so far, except for their lateness. Mountain Bluebirds are numerous and two are hanging around our shop. If they can contend with the sparrows they may nest there. There appears to be a pair of Mallards on every slough.

CHILDRENS' NATURE STORIES

We are pleased to learn that a series of Nature Stories, written by Mrs. John Hubbard, Jr., of Grenfell, is to be broadcast by the C. B. C. The series will start on July 4 and will continue once a week for thirteen weeks.

These stories, written a few years ago, have been altered to make them of uniform length for radio. Mrs. Hubbard informs that she is adding a nature note with each story and hopes she will be able to put in a plug for the BLUE JAY from time to time.

The Society offers it congratulations to Mrs. Hubbard, who for many years has been an enthusiastic naturalist. Members will look forward with interest to the time when they can hear these stories.

THE HORNED LARK

Here is a child's story written by Robert J. Spring, of 1379 Elphinstone St., Regina. Bob is keenly interested in nature and in a few years no doubt will become an ardent member of our Society. He is now twelve years of age.

"I have a story about seeing and finding a Horned Lark's nest which I did not disturb. I put food out for the Horned Lark. The food consisted of bread, cookie crumbs and bits of fat which were put into a box that sheltered the eating birds. The box blew away on April 4th. Here is my story for your magazine:

The well-known Horned Lark was sighted on the outskirts of Regina. When the bird was seen it was eating food someone put out for it. The food was inside a box so it would not blow away, but on April 4th the box did blow away and the birds could not eat in the shelter.

The Meadowlark and the Horned Lark are alike in many ways, but the Horned Lark is easily distinguished by two black feathers sticking up like horns. The Horned Lark got its name on account of these two feathers on the top of its head. The Meadowlark got its name because it was always in meadows. The Indians used to say that the Horned Lark was an evil spirit."

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OUR DUTY

As Naturalist and citizens of Saskatchewan, it is our duty to teach our children, by example, to take an interest in our wild life - to appreciate the beauty and value of our flowers, birds, and other animals and to protect them from harm.

Predator control is not a subject for children. It is our duty to teach them to conserve and not to kill. We should encourage them to write essays on conservation and not on destruction. "My Wildlife Heritage and What it Means to Me" is a splendid subject, but its context should not be directed towards extermination -- not by school children.

Yet two major campaigns have been conducted within our schools by the predator control committee of the Fish and Game League. Scholarships and a fifty dollar prize have been awarded for the best essay under the above title -- an essay dealing with ruthless destruction. It has even been suggested that predator control films, dealing with ways to slaughter crows, magpies and coyotes be prepared and distributed to our schools.

OUR DUTY (Cont'd)

It is the boast that the result of these campaigns against predator wildlife in 1949 has accounted for the destruction of 189,161 adult and fledgling birds and eggs. As a regular program it is now urged that the ineffective bounty system be replaced by a "big prize money system" -- prizes to be won by your children and mine.

Predator control in many cases may be necessary. But let the adults handle the problem -- it is not a job for children. I would never permit a child of mine to enter such a contest -- would you?

The Editor.

SUGGESTIONS AND OBSERVATIONS

S.P. Jordan, Saskatoon

Here is a thought that occurred to me when reading information in the BLUE JAY -- information which had been sent in by people who were widely scattered throughout the province. Would it be possible to publish a map and mark on it the names of the cities, towns, villages and farms from whence the most contributions are sent?

I thought the last edition of the BLUE JAY was particularly excellent. I consider the "Long-tailed Weasel" by Wm. Yanchinski, "The Coyote" by Kerry Wood and "It Lives by its Wits," by Ed Wiley, the best three conservation articles I have read for some time.

My nature observations for the last two or three months have been rather scanty but they might be of some interest and value.

To see a robin, a flicker and a meadowlark in one tree might not be a phenomenal occurrence but I was surprised to see these three birds sitting on the same branch on April 30.

On a trip from Davidson to Saskatoon on May 5th I saw many ducks; it seemed as if there were at least one pair on every patch of water. Pintails and Mallards predominated. I noticed a pair of crows attack what I suspect was a Marsh Hawk. I also noted four or five other slow-flying hawks.

Some of the people in Davidson told me that there were Sandhill Cranes in the vicinity and that they had been out shooting them. They treated the matter very casually and called the Cranes "Turkeys." They prided themselves in the number that they had shot and that at one time a wounded crane had actually attacked a man. Such people as this certainly suffer from a dearth of supervision and an overdose of ignorance. I wonder if our Society could do anything about such killings. Posters in the local pool-room warning people of the consequences of law infractions might be of some help. Education is a little late for these people.

On a walk along the river bank at Saskatoon, on Sunday, May 7th, I noticed that two crows had built a nest. I consider the crows rather nervy because the nest is only a few steps to the city streets and the path that runs by it is used by many pedestrians. My faith in human nature will be restored if the crows successfully raise their young there.

I hope all are looking forward to the summer and to the seeing and hearing of our many interesting birds and animals and flowers. I do love flowers and even though I can't identify many of them I still like to see them growing in the fields.

BIRD BANDING AT BURNHAM

Arthur Ward

The cold weather of the first week of April was not very conducive in the way of movement of birds at this point. About this time the Tree Sparrows and Juncos, which generally lead the way, are arriving in large numbers. Only a few Tree Sparrows, however, called and then quickly passed on. It was not until the 23rd of April that the first Junco was banded. After that they continued to come until the sixth of May. Water is very plentiful everywhere so that many species are not congregating in the small sanctuaries around the farms.

The Barn Swallow, usually dated May 9th, did not arrive until the 12th.

Some trees are showing signs of budding (May 14) and are not likely to be far enough advanced to suffer, should there be a repetition of the disastrous frost of 19 degrees above zero, which destroyed all foliage and birds' eggs on May 22nd of last year.

To this date, 18 species of birds have been observed in the sanctuary and 9 of these species have been banded. They are:

42 Slate-coloured Juncos

2 Myrtle Warblers

1 Song Sparrow

2 Tree Sparrows

2 Olive-backed Thrushes

6 Gambel Sparrows

1 Red-breasted Nuthatch

1 Eastern Towhee

3 Lincoln Sparrows

BIRD BANDING IN CALIFORNIA

In our last issue we told how Mr. and Mrs. Ward were enjoying the flowers, birds and scenery of Sunny California, while we were shivering during those forty days of forty below. Not being convenient to take his traps with him, Mr. Ward had to make them on the spot, for to him, bird-banding is a "must." Following are some of his notes on the subject.

"The presence of trees in and around places adjacent to Los Angeles afford attraction to many species of birds. One of the most noticeable is the Mocking Bird. The white wing patches and outer tail feathers, conspicuous in flight, were seen everywhere. They were on the roofs of houses and were certainly more plentiful than the House Sparrow, of which there were remarkably few.

I trapped most kinds of birds that frequented the Gardens where we were staying in Whittier. Among them were the Brown Towhee, Gambel's Sparrow, Song Sparrow, House Finch, California Jay, Ring-tailed Dove, Ruby-throated Hummingbird, Audubon Warbler and the Mocking Bird.

The latter, when trapped, loudly sounded its resentment and used its beak to good effect. This bird, though having a lengthy repertoire, in my opinion, is not as entertaining as the English Thrush. The Jay, though noisy, when at large, seemed to enjoy being handled and would linger lying on its back in the open hand before taking off.

The birds there seemed more difficult to catch with the type of trap used than in Saskatchewan. Instead of flying to the back of the trap, they quickly backed out at the slightest noise.

Continued

BIRD BANDING IN CALIFORNIA (Cont'd)

To a point of enthusiasm nothing could hardly excel that of the members of the Audubon Society of Whittier and Los Angeles in the methods of conservation. Theirs is not just a matter of bird spotting, something of which they are adepts, but their activities are conducted on a scientific basis. Both sexes, dressed in hiking attire and armed with A.O.U. cards and binoculars, assemble monthly for a scheduled field trip within some bird sanctuary.

We were invited to take part in these field trips during our stay there, and the associations and outings proved very interesting. After the jaunt, lunch is partaken of and the results of the observations are carefully tabulated. Some of the members come long distances for these occasions."

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WINTER VISITANTS AT YORKTON

C. O. Shaw

Had they known it, the friends from the North might have stayed for another month without any signs of discomfort. As it was, they remained at Yorkton until late in May.

The Bohemian Waxwings were first seen on November 9, and remained until March 6. The Pine Grosbeaks visited the territory in fairly large numbers during the last week in January and the first two weeks in February. From March 5 to March 12, ten Evening Grosbeaks spent their time stripping maple seeds from the trees surrounding the Rotary Club Kiddies' Park. On March 23, Dr. C. J. Houston saw between 30 and 40 Evening Grosbeaks on his home grounds.

(On April the 20th the Grosbeaks were still at Yorkton. We have had no report since, but indications up to May 15, as far as the weather is concerned, points to the fact that they may still have been there).

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THE WHOOPER LAYS AN EGG

Saskatchewan Nature enthusiasts are Whooping Crane conscious these days. With fingers crossed, but yet with a glimmer of hope, they look forward to the day when these great and lovely birds will come back to their Saskatchewan home again in numbers, to grace the country with their presence and to once more rear their families.

Of particular interest them is the following report from Corpus Christi, Texas, written on April 24.

"The world's only captive whooping crane 'lovers' have produced an egg - and maybe more.

This is big news, since there are only 36 whoopers left in the world.

The lovers are Josephine and Crip. They are honeymooning on a 150-acre nesting ground at Arkansas national wildlife refuge near here.

The egg was discovered Monday by Julian A. Howard, refuge manager, in a nest 300 yards off shore in short marsh grass. He doesn't intend to bother the birds enough to find out about a second egg. An almost-constant watch will be maintained through powerful field glasses from an observation tower.

Continued

THE WHOOPER LAYS AN EGG (Cont'd)

"If the eggs come to maturity, the refuge will have the only young whoopers raised in captivity. For two years, the United States fish and wildlife service has sought a mating in a hope of helping to stop the extinction of North America's tallest bird.

This year's nesting is the second for Josephine. She laid two eggs, which turned out to be infertile, last spring. Her mate then was Pete, who died last July. In October, Jo and Crip were introduced and they have been carrying out a whooping crane courtship ever since."

AN EARLY NESTER

C. Stuart Francis

On April 4th my son and I found a Great Horned Owl's nest in a stand of mixed forest of Aspen, Poplar and White Spruce. The nest contained three eggs, which we removed and took home. They were slightly incubated and of the usual pure white color of most owl's eggs.

In the area, adjacent to the nesting site, quite a number of Ruffed Grouse had met their doom by this cruel night terror. The nest was first built last year by a pair of Cooper's Hawks. The owls had added more material on top of it and made it larger. The nest was about eighteen feet from the ground. There was a good foot of snow at the time we discovered the nest.

(P.L. Beckie found a Horned Owl's nest at Bladworth on March 25. The nest was in a clump of poplars. It was down-lined and contained three eggs).

INGRATITUDE

Last winter we began putting out grain for Sharp-tailed Grouse about January 1st, and within a week there were about forty or more of these birds feeding in the yard. They usually arrived early in the morning before sunup, coming from a north-east direction where there was good sleeping territory about half a mile distant. On arriving from their snow-beds they almost always alighted for a brief period on a row of Jack Pines I have planted for a windbreak. These trees are about eighteen feet high and when a bird as heavy as a Sharp-tail lands on the uppermost branches of a coniferous tree during severe sub-zero weather, of from ten to forty-five degrees below zero, (as it was throughout January and most of February) it means severe damage to the tree, if it is done often enough. The result, in this instant, was that branches up to eighteen inches in length were snapped off. By spring, the tops of these pines had a very bedraggled appearance and had lost from one to two season's growth.

In future we will be feeding the Sharp Tails out in the fields around the strawstacks instead.

Gifts of the BLUE JAY for the current year have been supplied to the Tisdale High School reading room, by Mr. E. W. Van Blaricom, K.O., Tisdale, and to the Swift Current Public School Library by Mr. Arch. C. Budd, Swift Current.

DANCING GROUNDS

We have now quite a fine record of Sharp-tailed Grouse dancing grounds. These records are valuable and have proved especially so to a party of American photographers who have built up in color one of the most interesting records of the antics of these birds ever recorded on the screen.

Three more have been reported. P.L. Bookie, of Bladworth, tells of a dancing hill on the farm of his uncle. It is on the N.W. quarter of Section 27, Township 28, Range 1, W. of 3rd. Although the Beckies live half a mile away the birds are distinctly heard at times. About fourteen birds congregate on this hill.

And then he reports that there is another dancing hill on the S.E. quarter of Section 36, Township 28, Range 1, E. of 3rd. The number of birds dancing there is considerable. The ground has been used for at least six years. The first mentioned is on cultivated land; the second is an unpastured prairie.

George H. Heber, Deputy Game Warden at Duval, informs us that the Sharptails are very busy every year parading their skill on a hill of the S.E. quarter of Section 26, Township 25, Range 21, W. of 2nd.

CHICKADEES AT WORK

H.M. Rayner, Ituna

During most of the winter I have had some fat meat tied to the tops of some bushes close to the window of our dining room. I have had the opportunity of watching chickadees at close range for an hour or more every day for more than three months. During this time I observed that when a chickadee dislodges a morsel of meat or fat that is too large for him to swallow at once, he at once flies to another bush or tree, at some distance from the bait. If the lump is of such a size that there is a reasonable prospect of its getting down his gullet, he will press it against a twig or branch. This enables him to open his beak and get a fresh hold on the food without dropping it. Thus he manages to get it down.

If the morsel of food is too large for this procedure, he proceeds as follows: pressing the food against the twig on which he is perching, he brings his feet and legs tight together (with the food between them) and thus holds it until by pecking he can reduce its size.

Woodpeckers, both Downy and Hairy, came to the same bait. The woodpeckers appear to know nothing of the technique employed by the chickadees, and as a result they frequently drop lumps of food when trying to swallow them down; for in order to take a new gulp, they must first open the beak a little, and thus they let go of the food. Chickadees stayed near the ground under the bait when the woodpeckers were feeding, and promptly snapped up the pieces the woodpeckers would drop.

I am sorry I was unable to take photographs. I have no suitable camera for this kind of work, and - alas - have not the time necessary to obtain pictures.

There is one picture I would like to have in particular. It is Chickadees bathing in dry snow. They use the same movements as they would in water.

1950 SPRING MIGRATION RECORDS

As suggested in our last issue, it is not possible for us to publish the migration record lists of all our correspondents who have so kindly sent them to us. These records, however, are very valuable for purposes of reference. The thought occurred to us that the publication of one list might serve both as an incentive for new members to do the same and also as a comparative list for those who have already cultivated the habit, and who live in a different area.

For these purposes, then, we have selected the records from Bladworth, compiled by P. Laurence Beckie.

March 2	Horned Lark (main flock)	April 19	Red-winged Blackbirds
20	Prairie Falcon		(flocks of them)
25	Horned Owl nest (3 eggs)	19	Shoveller Duck
29	Crow	19	Sharp-shinned Hawk
April 2	Mountain Bluebird	20	Great Blue Heron
2	American Goshawk		(first I ever saw)
5	Marsh Hawk	20	Geese (unidentified,
5	American Rough-leg Hawk		(200 birds)
6	Slate-coloured Junco	20	McCowan Longspur
7	Swainson Hawk	22	Chestnut-collared
9	Meadowlark		Longspur
12	Sparrow Hawk	22	Franklin Gull
13	Herring Gulls	23	Lesser Canada Goose
13	American Long-eared Owl	23	Ferruginous Rough-
14	Tree Sparrow (in large numbers		legged Hawk (nine)
	this spring)	23	Blue-winged Teal
14	Pintail Duck	24	Brewer's Blackbird
14	Mallard Duck	24	Vesper Sparrow
14	Sandhill Crane	27	Myrtle Warbler (an
15	Lapland Longspurs (thousands		unusual date)
	during the past month)	28	Marbled Godwit
15	Pigeon Hawk	28	Common Grackle
15	Robin	28	Yellow-shafted Flicker
15	Killdeer Flover	30	Common Shrike
		30	Western Willet
May 6	Green-winged Teal		
8	Solitary Sandpiper		
8	Spotted Sandpiper		
10	Lesser Yellow-legs		
11	Red-breasted Nuthatch		

FLASH! (Friday, May 26)

Josephine and Crip are proud parents today. Rusty, the first Whooping Crane ever to be born in captivity arrived at last.

It is a great event, not only for Jo and Crip but to naturalists throughout the world.

JUSTIFIABLE CONDEMNATION

By Mrs. O. L. Wolters,
Tolland, Alberta.

(In our last issue, Mr. S.P. Jordan, of Saskatoon, wrote in part, "My theory is that there is a place in nature for every animal and bird. Man has been interfering in Nature's balance for too long a period of time to even hope to make an improvement. If a cowbird wants to put its egg in a warbler's nest, then I consider that the cowbird's privilege. If a family of magpies kill a few songbirds, then that, too, is their privilege.")

True; conservation needs reason as well as the aid of guns. But why? Because hunting seems to be an ever-increasing sport and recreation, and when so large a percentage of the population indulge lawfully and in some cases unlawfully, the poor animals and birds don't need such things as wolves, crows, magpies or cowbirds to keep their numbers down.

I believe in fair play any day, and to me, a cowbird is a good size in comparison to a little goldfinch. Many a time I have found its egg in a finch's nest. Of course I oust it out as only one would be enough to spoil chances of baby goldfinches getting their share of food from parent finches. We feel that crooks and cheats must be punished in the human race (when caught.) so why not in the bird world also. I'm sure the song and looks of a finch are enlightning to one's spirits any old time, while a cowbird is not, although they do eat insects.

A crow has something in his favor as he eats lots of grasshoppers and is only here part time, but a magpie carries on his destruction all year, picking eyes out of helpless lambs and holes in live animals. They start where a warble has been or a brand, sometimes killing the animal as they pick right through to kidneys, etc. We lost a cow a year ago from just that.

There are several bluffs right around our home where all kinds of birds nest except crows and magpies. Even then crows come when all is quiet during the sleeping-in periods of Sunday mornings, and often we aren't on deck soon enough to save a nest. Also I'm very sure they are not entitled to my chickens!

I am sorry to say something has happened to the flickers that usually nest here around our home. All last year there were about six and so far this year there are only two males. There seems to be a mistaken idea that they are destructive because they make holes in granaries. There are many other worthwhile characteristics that make this damage seem small in comparison.

Mine is not hearsay or just figuring, as I live with these birds all around and allow them to be a part of my life which would be very dull and uninteresting without the songs and glimpses of song and game birds and other animals.

Yours for better conservation.

CONSERVATION PLEDGE

Mrs. Wolters.

Following is a pledge recited regularly by many school children and patriotic groups throughout the United States, as an inspiration to save irreplaceable natural resources:

I give my pledge as an American
to save and faithfully to defend from waste
the Natural resources of my country -- its
soil and minerals, its forests,
waters and wildlife.

CONSERVATION PLEDGE (Cont'd)

This conservation pledge appears in "Outdoor Life." I have been wondering why Canada's conservationists could not adopt one similar with a Beaver or Whooping Crane at the top; instead of stars, have maple leaves, and, of course, have "A Canadian" instead of "An American." This emblem was a result of a nation-wide contest. I firmly believe it would go a long way in educating Canadians to be conservation minded, or at least to make them realize that NATURE is for "All to enjoy and all to Protect."

From OUTDOOR LIFE: "All over the nation today, framed posters of America's Conservation Pledge are being put up for display in stores, schools, offices and clubrooms. Sportsmen and conservationists by the thousands demanded these posters, and OUTDOOR LIFE had them prepared as a public service."

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FOREST CONSERVATION

"This winter," writes C. Stuart Francis, of Torch River, "I obtained from the Forest Service at Ottawa a number of copies of a very fine booklet, entitled, "Forest Conservation," which I gave out to several of my neighbors, whom I thought would be pleased to have the opportunity to get such splendid Forest facts as are contained in these attractive booklets. So all of you Nature Lovers, if you wish to add a valuable book to your bookshelf, be sure to send to Ottawa for a copy. It is free."

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HOW TO MAKE A BIRD HOUSE

(From "Chickadee Notes," Winnipeg Free Press, March 11).

"Birds that nest in cavities have likes and dislikes about their homes and it is well to build according to the average requirements of the species you desire as tenants. One of the best booklets that has come to our notice, is "Bird Houses, Baths and Feeding Shelters, How to Make and Where to Place Them," by Edmund J. Sawyer, the well-known American bird artist. It is issued by the Cranbrook Institute of Science, Bloomfield Hills, Michigan, at twenty cents, U.S. Currency. This 36-page pamphlet has many plans of bird boxes and charming sketches of the likely occupants. A list of the Institute's manuals on birds and other wildlife will be sent on request."

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ONE BLIND MOUSE

By C.C. Shaw, Yorkton



While out to the edge of the city for a walk Thursday (Apr. 20) my attention was suddenly attracted to a mouse scampering leisurely along a damp cinder path. It stopped within a few inches of my shoe and began to nibble at a patch of melting snow. After satisfying his thirst he, (verified later) took a few short hops and banged his nose against a fence post. I was as surprised as the mouse must have been. Kneeling down to his level I noticed he was completely blind. He was also apparently deaf

and when picked up made no audible protest though threatened with his chisel-like teeth. From all appearances the mouse was otherwise in good health and as I returned him to the path he busily went about his business of nibbling among the damp leaves. My identification was that of a "Deer Mouse" or sometimes called a "White Footed Mouse." I realize there are geographical variations and perhaps should have packed him off to the museum. However, I felt sorry for any creature, blind on such a beautiful spring day.

As sometimes happens this was one of those occasions when I left my camera at the office. I understand this species is nocturnal.

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SIMPSON SCHOOL NATURE CLUB

We are in receipt of the most remarkable nature record, kept by boys and girls, that has yet come to our attention. It is a forty page report of birds, amphibians, reptiles, mammals and insects seen by the members of the Yorkton Simpson School Nature Club, and recorded by their enthusiastic leader, Miss Pauline Summers, a teacher of that school.

Observations have been made every week and sometimes nearly every day from August 29 to November 14, 1949, and from February 28 to May 13, 1950. A total of thousands of birds have been seen, identified and recorded by members of the Club. The total number of species has not been checked but it is safe to say that practically every bird that lives in or visits the vicinity of Yorkton has been spotted by this group of keen-eyed naturalists. When identity is in doubt, Miss Summers comes to the rescue, and by her own practical knowledge, augmented by "Taverner" and Peterson's "Field Guide," she comes up with the correct determinations.

Not only are birds observed and discussed but bears, flying squirrels, snakes, salamanders, rabbits, gophers, muskrats, chipmunks, coyotes, butterflies and beetles have all been seen, named and duly recorded. Among their projects the Club has carefully examined the crop of a Prairie Chicken and taken from it 266 separate items which have been classified as fruits, berries, seeds, beetles, worms, eggs, leaves, twigs, etc.

If Saskatchewan could boast of many clubs of this nature, encouraged by enthusiastic and competent leadership, it would become a province of ardent naturalists in a few years. Miss Summers is to be highly congratulated on the splendid work which she is doing among the younger generation.

RABBITS PLENTIFUL AT BLADWORTH

Jack Rabbits are becoming more plentiful and are nearing the top of their cycle. I shot eight this winter and there are about fifteen more around the place that have survived. I saw ten on a half section on March 19. Bush Rabbits are also the most numerous I have ever seen. Willows, bent by the weight of the snow offer good shelter and protection. I noticed one place where two coyotes tried to get at a rabbit. One dug from the top and one from the side, but both ran into a very efficient screen of willow. The rabbits ate many tender willow shoots and bark from the larger willows.

I also found three sloughs where large trees have been practically stripped of their bark by porcupines. One of these sloughs is so far from the other that I assume there must have been two porcupines. I also noticed that the bush rabbits and porcupine ate from the same tree. The porcupine cut branches off that were an inch in diameter.

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The Provincial Museum is with the rabbit population in It seems that in some areas in others there are very few.

Aerial observations made Museum Staff, B. McJorquodale following facts:

From Emmaline Lake, the presence of rabbits grades From Emmaline Lake north and plentiful and exist in large region. Montreal Lake region and eastward from there show evidence of the rabbit population being low, although much more common than in the Big River region.



desirous of reports dealing various parts of the province. they are very plentiful, while

recently by two members of the and Fred Lahrman indicated the

south-west to Big River region down to being almost nothing. eastward they become quite numbers in the Lac La Ronge

THE CYCLE

According to an article written by John Patrick Gillese and reprinted in the March number of "National Wildlife and Conservation Digest," rabbit cycles in the West follow one another with mathematical precision. In fact, the records of the Hudson Bay Company, dating back more than two hundred years, indicate the exact average period of the cycle is 9.6 years. Prairie Chicken, Grouse, Hungarian Partridge, Magpies, Evening Grosbeaks and Blue Jays have their cycles too, which closely follow that of the rabbit. Many mammals do the same thing, for the rabbit furnishes food not only to the Indian in our Northland but to coyotes, weasels and snowy owls. No animal follows the cycle more closely than the lynx.

The last cycle reached its peak in 1942. In that year the West was almost overrun with rabbits, and predators and game birds were numerous. It was the year of the hunters' paradise. The next peak comes in 1952. We can expect until that year an increasing number, not only of rabbits, but game birds, and Owls and Coyotes.

After that, for a number of years, these animals will disappear as if by magic. By 1955 we will not have to worry about coyote control by poison and organized hunts. Without their natural supply of food the number of these predators will dwindle to a new low.

THE CYCLE (Cont'd)

Mr. Gillese writes: "Both last year and this, game birds showed steady signs of a comeback, and when the current cycle reaches its estimated peak, the north will be a sight to behold. Farmers will have to burn haystacks again to get rid of dead rabbits, and hunters will bag their bird quotas the first day out. NOTHING CAN PREVENT IT."

Now this remains to be proved, and our Society should be in a position to do so. Please keep this in mind and let us have your actual observations.

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ALL THE WORLD LOVES A YOUNG HELPLESS ANIMAL

People instinctively have a love for wild animals, particularly young wild animals. The truth of this fact was amply demonstrated when hundreds of men, women and children - 5003, to be exact - flocked to the Provincial Museum recently to watch the antics of two bear cubs as they boxed one another, performed gymnastic stunts on the trunk and branches of a dead tree, and ate sweet morsels which were handed to them through the wire front of their temporary home.

The bears were sent to Regina, on April 28, by Mr. W.J. Watt, of Ile a la Crosse, and were kept at the museum for three weeks.

Following the departure of the cubs to their permanent home at the Wild Animal Park at Moose Jaw, their place was taken by two young timber wolves, sent to the museum by Mr. Schell, of the Natural Resources Department, stationed at Hudson Bay. During the first afternoon following their arrival, 1023 people visited their glass-covered display-pen and made their acquaintance.

Before this Issue reaches your home, two fawns will form the centre of attraction and no doubt will be received with similar interest and affection.

Young wild animals have a fascination hard to explain; people love them.

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BLISTERS ON RABBITS

Constable Ned Carnie, R.C.M.P., at Resolution, has been concerned about the appearance of blisters on rabbits in that area, and if these will affect the use of rabbit meat as food for man.

Mr. Fred Bard, Director of the Provincial Museum, has made several enquiries on his behalf, and has received the following information from Dr. C. G. Saunders, Professor of Parasitology, at the University of Saskatchewan.

"These are the larvae of a tapeworm in the form of a large fluid-filled vesicle with opaque white spots in clusters on the walls. Each spot is an inverted tapeworm head, complete with hooks and four suckers. The adult tape is *Multiceps multiceps* in *cannis*; dogs, coyotes, wolves, and will not develop in man.

The rabbits are therefore fit food for man, even if they are not properly cooked, but they should not be given to dogs unless boiled first."

REMINISCING

C. St. A. Nixon, Lintlaw.

Mrs. Henry Byhoffer, of this district, loaned me some copies of the BLUE JAY and after reading them I decided to subscribe because I have been interested in bird life since I homesteaded here over forty years ago.

In your April-June issue of 1949, there is a reference to Rats. They first appeared here about 20 years ago, I think, when one was seen running out of a stook. After that they were everywhere around the farm buildings, and caused me to give up an outdoor root cellar by burying the turnips in a filthy mess of chewed-up particles. One spring my wife had a coop and outdoor run of young turkey poults in front of her kitchen window, in order that she might keep an eye on the crows who were partial to them. One day she saw a rat jump out and run under the house. On investigation she found about 15 poults had been killed, their brains sucked, and the carcasses neatly stacked in a corner of the run. Apparently rats can be neat and tidy as well as dirty and messy. The rats disappeared by a lucky chance. A tin of poisoned grain which had been used for gophers was put away in the cellar out of reach of the children. In the spring I noticed the tin which I had forgotten all about, and found four or five dead mice in it. We never saw another rat around the place after that. They were very partial to cranberry jelly, and rolled the jars off the shelf in the cellar at every opportunity, and cleaned up on the contents.

Forty years ago bobolinks were common. They used to rise hovering a few feet above the bushes beside the trail. They have completely disappeared hereabouts for many years.

At that time the country was decidedly wet. "Three-day rains" were frequent. Now we only get pale imitations, and that rarely. Shallow sloughs of all sizes were everywhere. At first the population of the one on the farm was mainly grebes, coots and blue bills. These later became fewer as more of the larger ducks moved in. Now, nearly all the sloughs have dried up except in the spring and are growing hay and grain. Farmers say they will never fill up again. But when the waters started to recede, old bulrush stumps could be seen far out from the shore line, no doubt witness to an earlier drought before I arrived.

I was long puzzled by hundreds of crows that used to congregate every night in a bluff by the house. As nesting and brood raising was in full swing, I was at a loss to account for their presence. Dr. Speechly, to whom I put the question, thought they were unattached young males. I bowed to his authority though I could never see how there could have been so many of them in the crow population in the vicinity.

EVENING GROSBEAKS

Cliff Shaw

The Evening Grosbeaks have been abundant this spring, appearing in greater numbers than I have ever seen in other years. Companies of from 10 to 30 could be seen on any day since March 9 and today (April 8) a chap phoned to enquire what they were. He saw upwards of 200 behind the city hall.

ICHNEUMON FLY

The ability of Cliff Shaw, of Yorkton, to furnish the names of insects, birds, flowers, reptiles and mammals is well known not only in his home town but throughout many parts of the province. Day after day material comes to him for identification. If he cannot do this himself, as sometimes happens, he always knows who can make the identification and immediately writes a letter to the expert in that particular line.

Among the latest specimens was a wasp-like insect, sent by Mrs. H. Roach, of Okla, Saskatchewan. In her letter she says in part: "I found this insect in the house and it looked so bright and shiny that I am sure it was newly emerged. We burn only wood and these things seem to get into the house via that source. Will you please identify it for me?"

Mr. Shaw sent the insect to Mr. A. P. Arnason at the Dominion Entomological Laboratory at Saskatoon. Early in May this reply was received from Mr. Arnason:

"The specimen sent proved to be one of the insect parasites belonging to the family Ichneumonidae. These are, generally speaking, beneficial insects since they parasitize and eventually kill other insects, most of which are injurious.

The Ichneumonid may have been brought in in a cocoon with the wood, or it may have been actually a parasite on one of the wood-boring insects; in which case it would have been in the wood itself and happened to emerge in the house. Mrs. Roach need have no fears that the insect is harmful or injurious in any way. Although it is long and slender and may have the appearance of being a wasp it actually cannot sting man or domestic animals."

THE GRASSHOPPER MOUSE

Mr. J. E. McGinnis, of Yorkton, brought two small mammals to Mr. Shaw on May 10. These he sent to Mr. Fred Bard, director of the provincial museum. Mr. Bard replied as follows:

"The mouse is the Grasshopper Mouse and pinpoints Yorkton as another location from which we have not recorded it. It is my regret that we are not in a position to determine the geographical variation of the other mammal sent, a Pocket Gopher. We apparently have three species of pocket gophers in Saskatchewan and two might be obtainable from the Yorkton area.

I suggest that Mr. McGinnis, if he is interested in small mammals, take specimens from his area and submit them to us. These in turn will be submitted to authorities for sub-specific form. It will be necessary, however, to take the stomach contents out to ensure safe passage in mail transit. We find that small mammals are very difficult to do anything with unless they have been skinned in the field. They last only a few hours and then are absolutely worthless."

BARN RATS

These rodents are now very numerous around the mink ranches on Chitek Lake and around the barns at Chitek. Meadow Lake has been free of these pests but a couple of months ago a single rat was caught here. Its mate is still on the loose.

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ANTING

Mrs. M. S. Baptist, of Abbotsford, B.C. has brought to our attention a very interesting subject, that of a mysterious trait of certain birds called "anting." We have read considerable about this and have seen photographs of the procedure, but do not remember of its having been reported in the BLUE JAY by any of our members. This possibly may be a case of symbiosis, or mutual helpfulness. We would be pleased to receive reports from any who have observed these antics.

Mrs. Baptist sent us the following article on the subject, published in the Vancouver Daily Province, April 22, written by Mr. Wildwood in his "Wildwood Trails" column.

"For those who are interested in the ways of the wild birds, an interesting problem is presented. What is the reason for their association with ants at times, other than feeding on them.

This association has been noted; in the States, by Audubon a hundred years ago; by a school boy in Australia; by Germans who coined a new verb "anting;" in Ireland, and in an aviary in eastern Canada.

No one was concerned with Audubon's reference to turkeys rolling themselves and "dusting" in old ants nests, but fifteen years ago a youth near Melbourne, Australia, noticed starlings picking up ants with their beaks and putting them in the underfeathers of their wings. A professor in Germany took up the subject in a scientific journal and received in return, numerous replies from readers.

They had observed birds acting in an excited manner when ants were about; gathering them under their feet, lying on them, dancing over the, rubbing them into the bases of their feathers.

It appears that the actions of the birds are so swift that it is difficult to see what is done. Whether the effect desired is cleansing, de-lousing or tickling; or whether the odor of formic acid, strong when the ant is disturbed, is alluring, has not been decided, as interest among bird-watchers was not maintained.

Now the query has been opened again by a Scottish journal, "What is bird-anting?" Instances reported are so widely placed that scientific attention must be given to the subject. We know that some birds, particularly the flicker, woodpeckers and ground birds are fond enough of ants to eat them; but if they take an esthetic enjoyment from their acid vapour, as cats roll in the catnip-plant, and dogs in more forceful odors, they must be credited with a higher sense of smell that has been accorded to them hitherto. Their avoidance of odors we consider "foul" has never been conspicuous.

The ant habit is not confined to one kind of bird. Audubon saw young turkeys rolling in enjoyment; in Ireland, magpies were seen engaged. Carrion crows were watched covering themselves with scurrying ants.

American robins, bluebirds, grosbeaks, and blackbirds have been discovered; starlings apparently are the most active. Most remarkable was the effect in a Canadian aviary. When an ants' nest was thrown on the floor, twenty species out of the thirty-one present began "anting" at once.

Such evidence is too wide-spread to be either ridiculed or ignored any longer. These birds must be watched more closely until the true reason for such behaviour is settled. More observation must be reported. It is a mystery that anyone may solve by keen and accurate watchfulness when birds are noticed performing antics. They may gain as much as others do from talcum and Bath-salts, real or fanciful!"

HUNTING SIGNS AND HUNTERS

Madeline B. Runyan,
Punnichy.

It is heartening to see so many "NO HUNTING" signs in this locality. However, few people are aware that these signs must be the regulation size of at least one foot square, and must be posted at the four corners of one's farm.

I interviewed a member of our local R.C.M.P. for the purpose of learning the exact specifications. I hope that many of our readers will put up signs before the deer-hunting season opens again, and prevent the cruel slaughter we had last year. Not only were deer shot, but one of our neighbors lost a team of horses, while others lost calves and colts. One hunter (?) actually asked a local citizen just what a jumper looked like. Later the farmer found his buckskin colt shot.

Do not forget those signs!

THIRTEEN-STRIPED GOPHER

Wm. MacNeil,
Meadow Lake.

I was aware that there were colonies of the little striped gopher south of Meadow Lake, but I do not recall ever observing any along the roads and highways. On May 11, while driving north on Highway N. 4 to Jeannette Lake, I noticed one of these gophers just south of Beaver River and another just south of the Otter Creek bridge. This point, which is north of the Waterhen River is in the forest, several miles beyond and cultivated land.

Gophers appear to be rapidly increasing. Some fifteen have been trapped recently in the cemetery on the N.W. corner of this town.

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OUR FLOWERS

Before the BLUE JAY appears again many of our lovely spring flowers will have come and gone. Ordinarily many are in bloom by the end of May, but this year, to our knowledge, not more than fifteen species had bloomed up to that time. The leaves were not even out on the trees on May 24.

This condition will mean that most of our spring and summer flowers will bloom before our next issue is printed, and we look and hope for some interesting reports.

Keep in mind that the Western Red Lily is the floral emblem of Saskatchewan. When these flowers start to bloom we expect every member of the Society to do his part in protecting them and advising that they be not picked indiscriminately. We will again welcome reports on the prevalence of the Lily.

Make an attempt this year to become acquainted with some flowers that you have not known by name before. We will be pleased to assist in the identification of any plants in blossom that have been pressed and dried.

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PLANTS OF THE FARMING AND RANCHING AREAS OF THE CANADIAN PRAIRIES

This book, by Arch C. Budd, who has contributed so generously to our Botany section each issue, is on the press at the present time and will be ready for distribution shortly. Besides the flowering plants, Ferns and Fern Allies and Gymnosperms have been included. The book is well illustrated by many of Mr. Budd's drawings, as well as over fifty photographs taken by him.

Not before has so extensive a study been published about Western wild flowers. Judging from a preview of the original manuscript, we have no hesitancy in recommending this book to all who are interested in knowing more about our flora.

INDIAN PIPES

On Saturday, May 13, William MacNeil, Forester at Meadow Lake, noted several clusters of Indian Pipes (*Monotropa Uniflora*) on Section 1, Township 54, Range 17, West of 3rd. The clusters were last year's growth and were growing under a dense stand of fifty-year-old Jackpine.

Will other members be on the look-out for this interesting plant and report any finds.

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NATIONAL WILDLIFE CONSERVATION DIGEST

This is a new Nature magazine, published at 127 Ruby Street, Winnipeg. Volume I, No. 1, was printed in January. It is published monthly. The Digest contains Nature articles, and discusses conservation problems covering the North American continent. In it, the reader will find articles of lasting interest for the Nature lover and the sportsman.

We have received the first three numbers, and are very pleased with them. Here is a Canadian publication, worthy of the support of every naturalist. The subscription rate is \$3.00 a year.

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THE HARBINGER OF SPRING HAS HISTORIC PAST

By Cliff Shaw, Yorkton

(Published April 20, in the Western Producer)

"Before the end of April the warm sunshine will have unrolled a carpet of lavender crocuses across the prairies and in every rural school, boys and girls will vie with each other to be first in bringing a blossom to the teacher's desk.

Perhaps no flower on the prairies is more welcome than the first crocus. And although they are in no way related to the true crocus it is doubtful if they will ever be widely known on the prairies by any other name.

If you have tried to transplant the prairie crocuses you will have noticed that they grow from a sturdy taproot rather than from a bulb as does the true crocus. Instead they belong to a large plant family which

(Continued)

THE HARBINGER OF SPRING HAS HISTORIC PAST (Cont'd)

includes many of our most beautiful wild flowers, as well as some of the showy garden flowers such as the delphinium, peony and columbine.

Coming into blossom about the time of Easter, it is sometimes called the "Pasque" flower, but it is listed by the botanists as a "Crocus Anemone." According to Greek tradition Anemos was the god of wind and he is said to have used the flowers as his messengers to herald the coming of spring. The Romans are also reported to have picked the first Anemone of the year to guard them against fever.

The Pasque flower of Great Britain, which closely resembles our prairie crocus, likewise loves the open spaces and in Great Britain is to be found on the grassy slopes of the bare chalk downs. It is not a common flower and reports are that it does not grow in Scotland, Ireland or Wales. It is often called "Danes Blood" and according to tradition only grows where the blood of the Danes was shed in battle with the Saxons.

The plants have an irritating juice and because of this the European peasants in bygone days would run past the blossoms in the belief that the air was tainted. The rootstocks of the European species are said to be poisonous and at one time they were used by the people in the northern districts as a sure remedy for snake bites.

A U.S.A. agricultural bulletin states that the large amount of hairs on the fur-covered sepals of the young plants have been reported injurious to sheep which fed upon the plants.

The true crocus, which is known as "Crocus sativus," is an autumn crocus native to the shores of the Mediterranean. For centuries past this lovely flower has rightly earned the name of "vegetable gold," being the source of saffron, a highly prized yellow dye.

Even today the three yellow stigmas are picked by hand to obtain the saffron powder, one pound of which requires five pounds of stigmas. In early times it was also used in medicine, perfumes and seasoning and at the time of Nero's triumphant entry the streets of Rome were said to have been spread deep with the fragrant powder.

When the eager little students place their offerings of crocuses on teacher's desk this spring, they will indeed be giving a gift with an ancient and historic past behind it.

THE PYROLAS OR WINTERGREENS OF SASKATCHEWAN

Arch C. Budd

In our Province we find five species of Wintergreen or Pyrola, but only in shaded, moist locations. They are low growing plants with creeping roots and evergreen leaves, borne near or around the base of the flowering stem. Generally they are considered to be members of the Heath family (Ericaceae) but some authorities, Agardh, Britton and Brown, Rydberg, etc. make a separate family, Pyrolaceae. The nodding or pendent flowers are borne in a long, narrow raceme and have 5 petals, 5 sepals and 10 stamens. The long style generally protudes from the flower and is often curved. The flowers are followed by almost globular capsules which are divided into 5 cells and open from the base to discharge the seeds. The oil of wintergreen so commonly used as a flavouring is derived from another plant of the Heath family, the Checkerberry, (Gaultheria procumbens.) which is not found in Saskatchewan.

The following key and descriptions, which are taken from my book, soon to be published, will serve to distinguish the various species.

1. Style not protuding conspicuously from flower, and straight. (4) *P. minor.*
Style conspicuously protuding from flower. 2.
2. Flowers crowded on to one side of the stem (secund): style straight. (5) *P. secunda*
Flowers not all on one side of the stem; style curved. 3.
3. Petals pink or purplish in colour. (1) *P. asarifolia*
Petals white or greenish. 4.
4. Leaf blades round, usually shorter than leaf stalks. (2) *P. chlorantha*
Leaf blades oval, usually longer than stalks. (3) *P. elliptica*

(1) *Pyrola asarifolia* Michx. PINK WINTERGREEN

A plant from 6 to 15 inches high with leathery, shiny, basal leaves, cordate at the base and from 1 to 2 inches wide. The flowers, from 7 to 15 in number, are pinkish, up to 1/2 inch across when fully opened, and have 5 sepals, 5 petals and a protuding style. They are borne in an open raceme and are generally nodding. Fairly common in moist woods throughout the province. The variety *P. asarifolia* Michx. var. *incarnata* Fern. differs from the type by having leaf blades rounded or tapering at the base in place of being cordate. It is found in similar localities.

(2) *Pyrola chlorantha* Sw. GREENISH-FLOWERED WINTERGREEN

This species has round or broadly oval basal leaves, rounded at the apex. The leaves are thick and dull surfaced and grow on rather long stalks; the blades are from 3/8 to 1 1/2 inches wide. The flowers are greenish-white, about 1/2 inch across when opened, and borne racemosely on a stem from 4 to 12 inches high. There are from 3 to 10 flowers in an inflorescence. It is found in moist coniferous forest areas throughout the province.

(3) *Pyrola elliptica* Nutt. COMMON SHINLEAF

This species is similar to *P. chlorantha* but the leaf blades are oval, somewhat pointed at the apex and with the stalks shorter than the leaf blades. The leaves are much longer, from 1 1/2 to 3 inches in length. The flowers are very similar to *P. chlorantha* and are generally from 7 to 15 in an inflorescence. Fairly common in rich woods, particularly in the northern portion of Saskatchewan.

SASKATCHEWAN

WINTERGREENS.



THE PYROLAS OR WINTERGREENS OF SASKATCHEWAN (Cont'd)(4) Pyrola minor L. LESSER WINTERGREEN

A small species with thin, dark green, oval or rounded leaves that are from $3/8$ to $1\ 1/4$ inches long, and which grow on fairly long basal stalks. The flowers are small, about $1/4$ inch across, white or faintly pinkish, and are borne in a rather crowded raceme on a stem from 2 to 8 inches high. Occasionally found in woodlands in the Cypress Hills.

(5) Pyrola secunda L. ONE-SIDED WINTERGREEN

A rather small species, generally growing in colonies from a branched root-stalk. The leaf blades are thin, oval to lanceolate, pointed at either end and from 1 to $2\ 1/2$ inches long. The flowers are small, about $1/4$ inch across and crowded on to one side of the short stem, which is from 3 to 10 inches high. Fairly common in woodlands and bluffs throughout the whole of the province.

In the Cypress Hills, I have noticed that the Greenish-flowered Wintergreen is the earliest of the Pyrolas to come into bloom and that it is generally in the darker, and denser coniferous forest, amongst the Lodge-pole Pines.

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THE ORIGIN OF THE CYPRESS HILLS By August J. Breitung,
Ottawa.

The Cypress Hills is one of the most interesting areas in Western Canada for the study of Natural History. In 1947 the writer made a study of the flora of that area. It is considered one of the most unique areas in Canada.

These hills form an elevated plateau or series of plateaux situated in southwestern Saskatchewan and southeastern Alberta. The topmost formation, being the most recent, is known as the Cypress Hills formation. It was laid down in the Tertiary period and is of alluvial deposition. This is composed chiefly of hard, coarse conglomerates and interbedded with hard, grey, coarse sandstone. In general, this consists of smooth, well-rounded, ovoid boulders, cobbles and pebbles in a hard, grey, coarse matrix. The boulders are as much as 8 inches in maximum diameter, but average considerably less.

Erosion has cut the plateau so that a number of rocks underlying the Cypress Hills formation are exposed. In contrast, these are of a very soft nature of Paleocene and Cretaceous time and consist of shales, silts and sands.

There is much controversy as to the extent of the Cypress Hills in early Oligocene Time. The Cypress Hills formation was laid down in a freshwater environment. It was transported from the Rocky Mountains in the Tertiary Period. During the uplifting of the Rocky Mountains, vast glaciers accumulated and when the climate became ameliorated, their melting created enormous streams bringing with them gravels, silts and sands, thus creating an enormous fan eastward out across the plain as far east as the Dakotas.

Evidence of its alluvial deposition is from the smoothly worn, river sorted conglomerates. These decrease in size from west to east as the water carried the lighter material farther. In addition, the plateau having a west to east decline of 15 feet per mile indicates that it was an eastward flowing current.

Attempts have been made to determine the former height of the Rocky Mountains by calculating the force required to produce currents sufficient strong to transport the larger boulders 200 miles to the east. It may be

THE ORIGIN OF THE CYPRESS HILLS (Cont'd)

that the boulders were originally deposited much closer to the Rocky Mountains, and subsequently uplifted, reworked and transported to their present, temporary resting place.

When the climate became favourable for the coniferous forest to establish itself, it also spread out over this gravel fan, bringing with it many other species of plants peculiar to the Rocky Mountain region and are now relicts in the isolated hills of the western plains. Due to soil and climatic conditions, the forest could not persist on the intervening plain which was being carried away by the forces of erosion.

It is agreed by geologists that during the glacial epoch the western or more elevated parts of the Cypress Hills were not glaciated. Here on this island, then isolated and surrounded by the ice sheet and 200 miles east of the Rockies, persisted a relict flora of more than 50 foothill and Rocky Mountain species.

Some geologists believe that the Cypress Hills are the result of local uplift at the time of the uplifting of the Rocky Mountains.

Other authorities maintain that the Cypress Hills plateau was a trough in the Tertiary period and the gravel carried by enormous streams heading in mountain gorges 200 miles to the west. Later the softer material eroded rapidly away and even the greater part of the river bed itself, thus leaving the Cypress Hills with its hard capping of river sorted conglomerates as the highest elevated plateau on the plains of Western Canada.

It seems more logical to assume, from the above evidence, that the Cypress Hills formation is an alluvial deposition rather than a local uplift. There appear to be three reasons for this: (1) the smoothly worn, river-sorted, ovoid, slightly flattened cobbles and pebbles; (2) these cobbles and pebbles decrease in size from west to east; (3) the surface of the plateau has a west to east decline of 15 feet per mile, indicating a west to east current.

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ARCHAEOLOGY

Allan J. Hudson, Mortlach.

The offer of the Editor for a corner in the BLUE JAY for archaeologists is welcome. It presents archaeologists with an opportunity to let a wider circle of out-door people know what they are doing; what they hope to do and how others can help them in their efforts. For the aim of archaeologists is not just to make collections of the works of ancient man, but through their collecting to understand the man himself, his origins, his manners of life, his speed through time and space.

To do this, they have to find occupation sites that can be excavated stratigraphically, for it is only in this way that the sequences in cultures can be observed. It is here that observant out-door people can be of help in noticing clues to such sites. In our own discovery in the Besaul valley, near Mortlach, it was such a man who first observed the clues (bones weathering out of the soil) that led to a very good find.

From our deepest excavations right down to the old river sand, we have been able to establish a succession of point styles all within the notched point complex. Naturally, without the help of specialist opinion we have no means of accurate dating. The earliest form is a short, squat point, quite

ARCHAEOLOGY (Cont'd)

thick through. Above them is a zone of very large points which would probably be throwing-stick points. Up to this stage, the workmanship is decidedly rough. From this stage on the points improve, becoming at the same time smaller.

Unfortunately because the C.P.R. right-of-way was moved into the valley in 1904, some of the sequence in the middle of the upper half has been destroyed. One can see this clearly by comparing the material from the valley with a collection of surface finds gathered over a period of years. However, a few tools within the last period of the sequence have been found. It is hoped that next summer new sites can be found to complete the sequence.

But we were specially fortunate in one respect. At other places in the valley were separate camp sites in which the deposits corresponded to different occupation levels. For instance, in one excavation at a depth of 8 inches to 10 inches, socketed bone handles are numerous. In the top few inches the most modern points of the midden type are found, and here again three-quarters of a mile away is a camp site of this period, so that we know positively the last points made and used by the Indians.

The ground water level in the Besaul valley is close to the surface, sometimes below, sometimes above, so that the flora is of a moist climate type. But one can walk a hundred yards up the north bank and be amongst sand dunes with desert-like plant forms, of which the cactus is typical. We often speculate how such a mixture of forms could exist side by side. Undoubtedly when the glaciers finally retreated from the area, moist climate conditions prevailed and there would be a spread of moist climate flora from which direction only a comparative study of plant forms would show. But as the region became drier, and there is a definite evidence in the valley of desiccation even in comparatively recent times, one supposes that the desert forms came from the south-west.

Apropos of this problem the Cypress Hills in the S.W. part of the province have a different geology. Parts were never glaciated and presuming that some plant and animal forms were able to survive in the unglaciated area, just what influence would they have when the ice retreated and how far would their influence extend.

If at present the subscription list of the BLUE JAY isn't well represented in that area, it is to be hoped it will improve later as there is a region of some significance in many ways, perhaps also archaeology.

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TWO-LEGGED PREDATORS!

At a recent sportsmen's meeting, Paul Miland heard a discussion of such predatory animals and birds as foxes, crows and owls.

Smiling, he observed: "They're bad all right, but it's the two-legged predator we must guard against. We all know how he operates. He's the one who is chopping down trees and doing nothing to replace them. He's the one who destroys all the natural bird and wildlife refuges--and then gripes because the shooting isn't good these days. And, of course, he's the person who fills the rivers and creeks with sewage instead of constructing sanitary disposal plants--and then yelps because the fishing has become so bad. Yes, we need to educate these two-legged predators." -- Conservation Volunteer.

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May 30: Rusty is lost; presumed dead. Too bad!

